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Towards Just Resilience: representing and including new constituencies in adaptive governance and law.

Margherita Pieraccini¹

1. INTRODUCTION

Resilience has become a key concept in the era of global environmental change in both academic and policy circles. In the field of ecology, its roots lie in the works on predation by Holling.² Holling demonstrated that ecosystems, rather than oscillating around a single equilibrium, could shift between multiple stable states and were complex and adaptive and constantly confronted by the unexpected. Since the work of Holling, resilience has been defined in multiple ways, to the point that some scholars attribute to it the same qualities of a ‘boundary object’. The concept of boundary object derives from the Science and Technology literature and it is used to refer to terms facilitating communication between different parties or disciplines by creating shared vocabulary without requiring full agreement regarding its precise meaning.³ Many social scientists have adopted the concept of resilience in the context of Holling’s definition to study social-ecological systems, examining the complex relationship and interdependence between ecological and social systems.⁴ A social-ecological system is a system of biophysical and social factors interacting at different temporal and geographical scales in a non-linear way.⁵

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² CS Holling, ‘Resilience and Stability of Ecological Systems’ (1973) 4 Annual Review of Ecology and Systematics 1, 1. There are other disciplines, such as psychology or mathematics, which employ the term resilience. This paper is not concerned with such disciplines. For the origin and use of resilience in these disciplines, see GE Richardson, ‘The Metatheory of Resilience and Resiliency’ (2002) 58 J Clin Psychol 307; LH Gunderson and CS Holling (eds), *Panarchy: Understanding Transformations in Human and Natural Systems* (Island Press 2002).

³ Fridolin Brand & Kurt Jax, ‘Focusing the Meaning(s) of Resilience: Resilience as a Descriptive Object and Boundary Concept’ (2007) 12(1) Ecology & Society 23.

⁴ W Neil Adger, ‘Social and Ecological Resilience: Are They Related?’ (2000) 24 Progress in Human Geography 347; Carl Folke, ‘Resilience: The Emergence of a Perspective for Social–Ecological Systems Analyses’ (2006) 16 Global Environmental Change 253. Resilience has been also used by other social scientists since the 1970s and 1980s in the field of psychology with different connotations. See Ann Masten, *Ordinary Magic: Resilience in Development* (Guilford Press 2014). For a discussion of the multiple definitions of resilience and its use both as a normative and descriptive concept, see Jacopo Baggio, Katrina Brown and Denis Hellebrandt, ‘Boundary Object or Bridging Concept? A Citation Network Analysis of Resilience’ (2015) 20(2) Ecology and Society 2.

⁵ Firket Berkes and Carl Folke (eds), *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience* (CUP 1998); Charles Redman and others, ‘Integrating Social Science into the Long-Term Ecological Research (LTER) Network: Social Dimensions of Ecological Change and Ecological Dimensions of Social Change’ (2004) 7 Ecosystems 161; Elinor Ostrom, ‘A General Framework for Analyzing Sustainability of Social-Ecological Systems’ (2009) 325 Science 419.

Adaptive governance has been singled out as the most appropriate strategy to build the resilience of social-ecological systems. Although there is no single definition of adaptive governance, at its core adaptive governance is a system of governance that does not aim at controlling/avoiding change but aims at managing uncertainty and complexity in social-ecological systems with a view to promote resilience and sustainable development.⁶ Proponents of the adaptive governance approach argue that learning and experimentation should be a shared enterprise requiring the collaboration of regulators and regulatees and emphasise the role of participation in decision-making.⁷ However, the democratic potential of adaptive governance remains under-explored in much of the literature as the question of who should be represented and why has not been fully addressed from a normative viewpoint.

This article provides a novel contribution to the existing adaptive governance literature and to its emphasis on participation by answering the question of inclusion and representation in resilience decision-making drawing on political theories of justice and green political thinking and making a case for the representation of new constituencies such as nature and/or future generations. The lack of attention paid to these new constituencies in the resilience literature on participation is somewhat surprising given that resilience literature is built on a recognition of the intertwined nature of social-ecological systems and recognises the importance of both biophysical and social factors in shaping responses to uncertainty across temporal as well as geographical scales. This article therefore presents a first attempt at filling this academic gap, developing a perspective of what is termed here “just resilience”. In so doing, it reflects on the challenges of such endeavour. This article is primarily concerned with setting out the theoretical argument, leaving to future work the task to suggest how specific sectors of environmental law could make strides towards accommodating just resilience.

The article is structured as follows: section 2 introduces the scholarship on resilience and the way in which the theme of participation in decision-making has been dealt with within that literature, section 3 brings justice considerations into the argument by drawing on political theories of justice and making a case to focus on procedural justice. Section 4 draws together

⁶ Thomas Dietz, Elinor Ostrom, and Paul Stern, ‘The Struggle to Govern the Commons’ (2003) 302 *Science* 1907; Brian Chaffin, Hannah Gosnell and Barbara Cosens, ‘A Decade of Adaptive Governance Scholarship: Synthesis and Future Directions’, (2014) 19(3) *Ecology and Society* 56.

⁷ See, Ryan Plummer and others, ‘Adaptive Co-Management: a Systematic Review and Analysis’ (2012) 17(3) *Ecology and Society* 11; Lindsay Stringer and others, ‘Unpacking “Participation” in the Adaptive Management of Social-Ecological Systems: a Critical Review’ (2006) 11(2) *Ecology and Society* 39.

the resilience perspective with ecocentric procedural justice scholarship, drawing on critical green political thinking and outlining the key traits of a 'just resilience' perspective. Section 5 offers conclusive remarks.

2. RESILIENCE, ADAPTIVE GOVERNANCE AND ADAPTIVE MANAGEMENT

The realisation that social-ecological systems are changing, often in unpredictable ways, has resulted in the concept of resilience gaining prominence in the last few decades. Given the large body of literature introducing the resilience perspective,⁸ there is no need for another summary. Suffice here to say that the resilience perspective contemplates systemic persistence while acknowledging uncertainty, surprise and change. Resilient systems respond to disturbance through learning and innovation, thereby enabling the system to adapt to threats and to transform if a system regime becomes untenable. In the field of ecology, the resilience perspective has its origins in the work of Holling in the 1970s proposing that ecosystems can be found in one of many alternative stable states,⁹ therefore questioning the predominant single-equilibrium view of ecosystems.¹⁰ Holling defined resilience as 'the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist'.¹¹ Resilience, therefore is the ecosystem's resistance to state shift. For Holling, the resilience perspective requires a 'qualitative capacity to devise systems that can absorb and accommodate future events in whatever unexpected form they may take'.¹² The emphasis is on the ability of systems to cope with uncertainty and change without shifting state.

In time, the resilience perspective has also entered the social sciences and has been applied to the study of social-ecological systems.¹³ Applying the perspective of resilience to the study of

⁸ See, for instance, Lance Gunderson, 'Ecological Resilience: in Theory and Application', (2000) 31 Annual Review of Ecology and Systematics 425; Marten Scheffer, *Critical Transitions in Nature and Society* (Princeton UP 2009).

⁹ In ecology, states are the set of unique biotic and abiotic factors making up an ecosystem.

¹⁰ Holling (n 1).

¹¹ *ibid* 17.

¹² *ibid* 21.

¹³ Lance Gunderson, and CS Holling (eds) *Panarchy: Understanding Transformations in Human and Natural Systems*. (Island Press 2002); Carl Folke, 'Resilience: the Emergence of a Perspective for Social-Ecological Systems Analyses' (2006) 16 Global Environmental Change 253; Brian Walker and others, 'Resilience Management in Social-Ecological Systems: a Working Hypothesis for a Participatory Approach' (2002) 6(1) Ecology and Society 14, Carl Folke and others, 'Resilience Thinking: Integrating Resilience, Adaptability and Transformability' (2010) 15(4) Ecology and Society 20.

social–ecological systems requires an incorporation of the ideas of adaptation, through learning and innovation and of transformation as well an acknowledgement of broad temporal and spatial scales, given the cross-scalar interplays between the components of the systems. The focus is on multiscalar, reciprocal influences and feedback mechanisms. Interdependency is at the core of the concept of a system, which differs from the concept of a set consisting of the addition/aggregation of different elements.¹⁴ The boundaries of a system, unquestionably, vary depending on the context of study.¹⁵ Therefore, the resilience of a social-ecological systems consists in the capacity to absorb perturbations of a human or ecological origin and to adapt while preserving its coherence and function and to transform when a system becomes unsustainable. Clearly, the resilience of a system is not always a desirable status (eg persistence of a state of poverty or of a malaria swamp). There can be positive or negative resilience. These normative distinctions are anthropocentric values placed on the resilience of a system. The focus of this article is on positive resilience understood as the capacity of a social-ecological system to support both ecosystem services, long-term structural ecosystem qualities and social sustainability. In the context of global environmental change, where attention is placed on adaptation and uncertainty, building the resilience of social-ecological systems becomes the ultimate goal.

The resilience perspective has strong implications for rethinking governance and law. If much of existing environmental governance and law has been based on an outdated ecological view underlined by principles of stability,¹⁶ resilience scholars have been arguing for a move towards adaptive governance. With shifting baselines and unpredictable radical ecological change, governance strategies aimed at the minimisation or mitigation of ecological damage to maintain or restore the integrity of natural resources in specific areas have become inadequate. For example, in writing about a new climate change adaptation regime for the regulation of environmental resources in the United States, Craig argues that ecological stationarity, embodied in the current preservationist and restoration regulatory paradigms, is ill-suited to

¹⁴ Maurizio Cafagno, *Principi e Strumenti di Tutela Ambientale come Sistema Complesso, Adattativo, Comune* (Giappichelli 2007).

¹⁵ See for example Brian Walker and others, 'Exploring Resilience in Social-Ecological Systems Through Comparative Studies and Theory Development: Introduction to the Special Issue' (2006) 11(1) *Ecology and Society* 12.

¹⁶ A Dan Tarlock, 'The Nonequilibrium Paradigm in Ecology and the Partial Unravelling of Environmental Law' (1994) 27 *Loyola of Los Angeles L Rev* 1121; Robin Craig and JB Ruhl, 'Designing Administrative Law for Adaptive Management' (2014) 67 *Vanderbilt Law Review* 1.

promote adaptation to climate change.¹⁷ This is because the preservationist paradigm enshrined in much environmental law requires solid knowledge of both 1) baseline conditions, which is not always available and 2) sources of impacts so these can be subject to impact assessments to value their consequences on the environment, which are not easily identifiable in the case of diffuse pollution and global environmental change. The current legal culture relies substantially on rational planning and ‘front-end’ regulatory tools employed before the taking of a decision. Impact assessments, both regulatory and environmental, are a typical example of such ‘front-end’ regulation as they are premised on the possibility to predict costs and benefits of particular regulatory choices or environmental impacts of particular strategies or projects prior to their occurrence. Once choices are made, they become definitive. This mode of regulation therefore obstructs long term regulatory flexibility. As Craig argues, then,

environmental and natural resources law in a climate change adaptation era require fundamental re-visioning, because both regulatory goals and the legal mechanisms for accomplishing them will have to be centred on the concept of change itself.¹⁸

Rather than control/minimising change, environmental governance in the context of global environmental change should focus more on shaping the ability of a system to cope with and adapt to change. Consequently, adaptive governance has been advocated as the key regulatory approach to build resilience because it champions collaboration, flexibility, learning and experimentation at multiple scales.¹⁹

The concept of adaptive governance was first developed by Dietz and others in a paper on common pool resources.²⁰ The authors defined adaptive governance as a way to confront the challenges of governance in the face of uncertainty at multiple levels. A number of requirements for adaptive governance were identified and the means to meet them. Analytical deliberation to foster trust and improve the knowledge base for decision-making was listed as a means to meet the criteria for adaptive governance. Adaptive governance entered the resilience literature a year later with the seminal paper by Walker and others in which a clear distinction was made between adaptive governance and adaptive management, with the former conceptualised as the evolution of rules that influence resilience during self-organisation and

¹⁷ Robin Craig, “Stationarity is Dead”—Long Live Transformation: Five Principles for Climate Change Adaptation Law (2010) 34 Harvard Env L Rev 9.

¹⁸ *ibid*, 30.

¹⁹ Carl Folke and others, ‘Adaptive Governance of Social-Ecological Systems’ (2005) 30 Annual Review of Environment and Resources 441.

²⁰ Dietz and others (n 5).

the latter as flexible management practice to retain critical ecological resources.²¹ The subsequent resilience literature has continued to employ the concepts of adaptive governance as well as adaptive management. Although there is no unified definition of adaptive governance and adaptive management and no single understanding of the relationship between the two terms,²² this article follows the view proposed by Folke and others that adaptive management is a way to operationalise adaptive governance, the latter conceptualised as the structure and processes of decision-making.²³

The concept of adaptive management was initially rendered popular in the 1970s and 1980s with Holling and Walters.²⁴ These resilience scholars argued that adaptive management is a structured process (a learning cycle) to identify and deal with critical uncertainties in natural resource management and design management experiments to reduce these uncertainties. They identified six steps of the adaptive management process: initial definition and assessment of the management problem, taking stock of current knowledge, identify uncertainties, implementation of measures, monitoring and evaluation.²⁵ The circular nature of the process means that evaluation will feed back into the assessment of the problem and the learning cycle will start again. Adaptive management differs from a ‘trial and error’ approach in that it is more procedurally structured.

Despite the various definitions and variations of adaptive management in place today, a number of core elements of the adaptive management approach can be identified. These are its process-oriented, ongoing, experimental and iterative nature and the emphasis on monitoring, reviewing and re-assessing to provide management solutions in the face of unpredictable change. Resilience scholars therefore argue that adaptive management requires iterative laws and regulations and a move away from ‘front-end’ towards ‘back-end’ regulation. This means, in the words of Ruhl, that

²¹ Brian Walker and others, ‘Resilience, adaptability and transformability in social–ecological systems’(2004) 9(2) *Ecology and Society* 5.

²² Ryan Plummer, Derek Armitage and Rob de Loe ‘Adaptive Co-Management and Its Relationship to Environmental Governance’ (2013) 18(1) *Ecology and Society* 21; Lyndal Hasselman, ‘Adaptive Management; Adaptive Co-Management and Adaptive Governance? What’s the Difference?’ (2017) 24 *Australasian J of Env Management* 31.

²³ Folke and others (n 19).

²⁴ CS Holling, *Adaptive Environmental Assessment and Management* (John Wiley and Sons 1978); CJ Walters, *Adaptive Management of Renewable Resources* (Macmillan 1986).

²⁵ *ibid.*

the more a program directs administrative action towards fixing long-term policies and decisions based on pre-regulatory analysis, the more “front-end” it is. Adaptive management requires the institutionalization of monitoring-adjustment frameworks that allow incremental policy and decision adjustments at the ‘back end’, where performance results can be evaluated and the new information can be feedback into the ongoing regulatory processes.²⁶

Such iterative, flexible regulatory practice is often portrayed as a collective effort in the literature that has merged the insights of adaptive management with those of the co-management literature.²⁷ Adaptive co-management brings together the dynamic learning of adaptive management with linkages required for cooperative and collaborative management to cope with uncertainty and change drawing on multiple knowledges. However, if adaptive management is about the scientific method-based approach for applying experiments to a policy, adaptive co-management is conceptually closer to adaptive governance in discussing participatory and adaptive systems of management. Therefore, the conceptual boundaries between the adaptive governance literature and the adaptive co-management literature are tenuous, with scholars using the terms interchangeably. The key distinction is between adaptive governance as the broader governance apparatus and adaptive management as the operational tool.

Both the adaptive governance and the adaptive management scholars have emphasised the importance of participation in decision-making.²⁸ However, they have not engaged in-depth with normative questions related to the type of actors and representations made in decision-making fora. Much of the existing literature has been underpinned by an instrumentalist rather than by a normative logic in advocating for participation. Indeed, this literature often links participation in decision-making to a discussion of processes of knowledge gathering to improve systemic resilience. Participation is characterised as a means to build on multiple knowledges (scientific and lay) in order to better face uncertainty and as a means to build trust among communities to ensure systemic resilience.²⁹ The majority of resilience scholars have not been preoccupied with power relations, issues of legitimacy and accountability of resilience

²⁶ JB Ruhl, ‘Regulation by Adaptive Management-Is it Possible?’ (2005) 7 Minnesota J of Law, Science and Technology 21.

²⁷ Fikret Berkes, ‘Evolution of Co-Management: Role of Knowledge Generation, Bridging Organizations and Social Learning’ (2009) 90 J of Environmental Management 1692.

²⁸ Dave Huitema and others, ‘Adaptive Water Governance: Assessing the Institutional Prescriptions of Adaptive (Co-) Management from a Governance Perspective and Defining a Research Agenda’ (2009) 14(1) Ecology and Society 21.

²⁹ Per Olsson, Carl Folke, Fikret Berkes, ‘Adaptive Co-management for Building Resilience in Social–Ecological Systems’ (2004) 34 Environmental Management 1.

interventions in discussing adaptive governance.³⁰ Critical scholars, primarily from the field of political ecology, have argued that resilience scholarship has neglected the question of ‘resilience for whom and by whom?’, not considering the power relations and power (in)balances shaping resilience decision-making.³¹ These scholars have argued that resilience thinking would benefit from internalising social science insights on power relations and agency in discussing adaptive governance and social-environmental change. This is because resilience is not a neutral term but it is, much like its precursor sustainable development, a value-laden term. Indeed, not everyone benefits equally or bears the same risks and responsibilities from different pathways to resilience, potentially leading to distributive injustices. Recognising resilience as political also points to the importance of inclusive debates on the meanings and pathways to resilience, thereby requiring an in-depth consideration of procedural justice, especially the issue of inclusion and representation in resilience decision-making as this article will show when introducing the justice literature.

Legal literature on resilience has responded to the criticisms by making the fundamental point that legal regimes need to maintain legitimacy whilst securing adaptive governance. As Cosens, a legal scholar writing on resilience, points out ‘the introduction of flexibility to ecosystem management challenges traditional sources of legitimacy, thus presenting a barrier to adoption of new approaches’.³² From an administrative law viewpoint, flexibility and experimentalism in the adaptive governance approach bring legitimacy and accountability challenges. As Craig and others argue, flexibility in adaptive governance brings in the problem of regulation being perceived as ‘perpetually destabilizing, disruptive and unfair’.³³ This is exacerbated by the fact that adaptive governance is often thought as involving multiple scales and some devolution of decision-making power to unelected groups. Cosens draws on Esty’s sources of legitimacy³⁴

³⁰ Melissa Leach (eds) *Re-framing Resilience: a Symposium Report* (STEPS 2008); Raven Cretney, ‘Resilience for Whom? Emerging Critical Geographies of Socio-ecological Resilience’ (2014) 8 *Geography Compass* 627; Katrina Brown, ‘Global environmental change I: A Social Turn for Resilience?’ (2014) 38 *Progress in Human Geography* 107; Katrina Brown, *Resilience, Development and Global Change* (Routledge 2016).

³¹ Betsy Beymer-Farris and others, ‘Promises and Pitfalls of Adaptive Management in Resilience Thinking: the Lens of Political Ecology’ In Tobia Plieninger and Claudia Bieling (eds) *Resilience in the Cultural Landscape* (CUP 2012); Muriel Cote and Andrea Nightingale, ‘Resilience Thinking Meets Social Theory: Situation Social Change in Social-Ecological Systems’ (2012) 36 *Progress in Human Geography* 472; Alf Honborg, ‘Revelations of Resilience: from the Ideological Disarmament of Disaster to the Revolutionary Implications of (P)anarchy’ (2013) 1 *Resilience* 116.

³² Barbara Cosens, ‘Legitimacy, Adaptation, and Resilience in Ecosystem Management’ (2013) 18(1) *Ecology and Society* 3; Cretney (n 30); Brown (n 30).

³³ Robin Craig and others, ‘Balancing Stability and Flexibility in Adaptive Governance: an Analysis of Tools Available in U.S. Environmental Law’ (2017) 22(2) *Ecology and Society* 3.

³⁴ Daniel Esty, ‘Good Governance at the Supranational Scale: Globalizing Administrative law’ (2006) 115 *Yale LJ* 1490.

to inject legitimacy considerations into adaptive governance. These sources include, inter alia, deliberative legitimacy, defined as the ‘expectation of public comment and dialogue in numerous aspects of agency decision-making’³⁵ and transparency requirements. Participation therefore becomes linked to the concept of legitimacy in such literature and not (only) to processes of knowledge-gathering for better outcomes. This is also clear in very recent literature in search for legal and institutional foundations for adaptive environmental governance, which restates the importance of public participation to secure legitimacy.³⁶ These articles move beyond a purely instrumental understanding of participation that characterised earlier literature and ‘legitimise’ adaptive governance.

However, even these writings have not explored in depth issues of inclusion and representation in decision-making. Who should get represented and why are fundamental normative questions that deserve more attention. This article, drawing on critical theories of environmental justice, attempts to fill this gap, shifting the discussion from legitimacy, as interpreted by Cosens,³⁷ to procedural justice and representation in resilience decision-making. Compared to a view based on legitimacy as social acceptance and participation as a key instrument for fostering legitimacy, a critical environmental justice perspective enables us to better advocate for the inclusion and representation of new constituencies beyond human beings.

3 TOWARDS JUST RESILIENCE

3.1 Procedural Justice

As discussed above, if resilience scholars have emphasised participatory decision-making in both adaptive governance and management, they have done so primarily from an instrumental perspective with participation understood as a means to reinforcing the knowledge base and securing positive outcomes when taking decisions in an uncertain world.³⁸ More recently, law and resilience academics have moved beyond such instrumentalist focus linking participation to legitimacy, defined as *social* acceptance of a decision, and thus necessarily anthropocentric. However, given that in resilience studies we are concerned with social-ecological systems, it is argued here that such anthropocentric stance is problematic. Analyses should move beyond

³⁵ Barbara Cosens and others, ‘Identifying Legal, Ecological and Governance Obstacles, and Opportunities for Adapting to Climate Change’ (2014) 6 Sustainability 2338, 2351.

³⁶ Daniel de Caro and others, ‘Legal and Institutional Foundations of Adaptive Environmental Governance’ (2017) 22(1) Ecology and Society 32; Barabara Cosens and others, ‘The Role of Law in Adaptive Governance’ (2017) 22(1) Ecology and Society 30; Craig and others (n 33).

³⁷ Cosens ‘Legitimacy, Adaptation and Resilience’ (n 32).

³⁸ Per Olsson, Carl Folke, Fikret Berkes (n 29).

a purely anthropocentric focus and be concerned also with nature itself, rather than with different social groups only. Secondly and relatedly, the existing resilience literature has not investigated in depth who should be involved in decision-making and why. References tend to be made to stakeholders and/or the public, but without discussing in depth which interests are to be represented and by whom and why.

A justice perspective can enable us to overcome such shortcomings by providing a more in-depth justification for the recognition of plural interests in decision-making and by moving beyond an anthropocentric bias. The first question to ask is what dimension of justice should be considered. Should discussions be centred on procedural or distributive dimensions of justice? That is to say, should discussions be centred on issues of recognition and participation (procedural dimension) or on the distribution of social-ecological goods and bads now and in the future (distributive dimension)? The focus, it is argued here should be on procedural justice due to pragmatic and theoretical reasons. The pragmatic justification for focussing on procedural justice is rooted in the resilience perspective itself. The systemic view of resilience scholarship highlights the existence of multiple physical and social scales contributing to the production and reproduction of a dynamic social-ecological system. As there is not one just society or one just environment, it becomes impossible answering distributive justice questions a priori. It is impossible at the outset to decide whether just distribution should require a balance between the costs of protection measures to (human) stakeholders and the costs of human interventions (eg project developments) to nature in the present and/or in the future. Also, it cannot be decided a priori whether the benefits and costs should be distributed equally between current and future generations, or whether global interests should be put in front of local ones. What is just distribution in a social-ecological system will change depending on the adaptation and transformation of the systemic components and the scales under consideration. Besides, if some environmental protection measures benefit both the environment and society through the provision of ecosystem services, environmental protection can be beneficial to protected species and habitats, but negative to socio-economic development. This means that the resilience of the natural system may undermine that of the social system or vice versa. Also, it could well be that the same environmental protection measures that are beneficial to the environment and provide ecosystem services to society as a whole and/or to future generations negatively impact on individuals or a defined category of stakeholders. Hence the social system, like the natural one, is plural: there is not just one society interacting with one environment and forming a unified, albeit complex, system striving for resilience. There may

be many societies, depending on the time frame employed (short-term, long term) and depending on the scale at which we are focussing (individual/group). Consequently, how the costs/benefits of environmental interventions are to be socially and ecologically distributed requires collective answers at different decision-making scales that are updated depending on the changing context. The substantive goals are both fluid and contextual. Therefore, instead of focussing on defining just goals in a complex system, attention should first be placed on procedural justice issues and in particular wide inclusion of actors in decision-making processes in order to collectively deliberate on the parameters of just distribution, given the multiple scales and interests at play and societal-ecological differences. It is through the wide inclusion of interests in on-going decision-making for a that discussion on just distributions in complex systems can be made.

Theoretically, the focus on procedural justice and wide inclusion is also supported by critical political scientists. The causal link between procedural and distributive justice has been made explicit in the deliberative democratic theories of justice of Young and Fraser and most recently, in green political theory, especially the works of Schlosberg on environmental justice, as reviewed below.³⁹ Young has recognised and criticised the fact that most classic theories of justice have been preoccupied solely with distributive justice concerns, following Rawlsian footsteps.⁴⁰ For Rawls, justice is about the fair distribution of social advantages.⁴¹ For Young, it is not sufficient to address distributive injustice. but it is necessary to look at the underlying causes producing such injustices.⁴² Young argues that equating justice with distribution is an exercise in reductionism because part of the problem of unjust distribution is the lack of recognition of group difference and related lack of inclusion in decision-making.⁴³ Lack of recognition of particular groups due to dominant cultural discourses and institutional practices determines their marginalisation in the political community potentially leading to unjust distribution as the interested of the marginalised groups are not represented. The guiding question of a theory of justice is no longer how and what can be distributed but how does unjust distribution occur. This shift requires attention to be paid to the cultural and institutional constraints that disable the achievement of distributive justice. Patterns of under-representation

³⁹ Iris Young *Inclusion and Democracy* (OUP 2000); Nancy Fraser, *Justice Interruptus: Critical Reflections on the "Postsocialist" Condition* (Routledge 1997); David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford University Press 2007).

⁴⁰ Iris Young, *Justice and the Politics of Difference* (Princeton UP 1990).

⁴¹ John Rawls, *A theory of Justice* (Harvard UP 2005).

⁴² Young, *Justice and the Politics of Difference* (n 40).

⁴³ *ibid* 3.

and mis-recognition of certain social groups are key causes of injustice. Due attention should be placed on the degree of fairness of the processes through which distribution occurs.⁴⁴

For Young, the legitimacy of a decision depends on the degree in which those affected by it have been included in the process and had power to influence the outcome.⁴⁵ Therefore, to address injustices, the focus should be on the rules and procedures for maximising inclusion. In *Inclusion and Democracy*, Young proposes a version of deliberative democracy to maximise inclusion. She begins by differentiating between aggregative and deliberative models of democratic decision-making, favouring the latter.⁴⁶ Aggregative models posit democratic decision-making as an expression and aggregation of different preferences whilst deliberative models consider decision-making as a space in which participants offer reasoned arguments in order to solve the issue at stake. Through authentic communication, the arguments put forward are tested, challenged and original positions transcended to arrive at the decision. As Young writes, ‘participants arrive at a decision not by determining what preferences have greatest numerical support, but by determining which proposals the collective agrees are supported by the best reasons’.⁴⁷ She also argues for a decentred model of democracy in which deliberation cannot occur only within official institutions such as legislative bodies and the courts but also within associations and public spaces of the civil society.⁴⁸ Communication should be flowing between these settings. The deliberative model Young presents is clearly influenced by Habermas’ theory of communicative action⁴⁹ and by his analysis of the role of the public sphere.⁵⁰ However, Young bypasses Habermas by moving away from an ideal speech situation. She does so by paying attention to the social and institutional elements that impede inclusion in deliberative fora.⁵¹ Due to social inequalities, some groups have more material or symbolic privileges than others, hence the definition of the common good is likely to express the views of the more powerful groups. Young distinguishes between forms of external and internal

⁴⁴ Young, *Inclusion and Democracy* (n 39).

⁴⁵ *ibid.*

⁴⁶ *ibid.*

⁴⁷ *ibid.* 24.

⁴⁸ *ibid.* Ch 5.

⁴⁹ Jürgen Habermas, *The Theory of Communicative Action: Volumes I and II* (Beacon Press 1984).

⁵⁰ Habermas defines the public sphere as: “a network for communicating information and points of view (i.e., opinions expressing affirmative or negative attitudes); the streams of communication are, in the process, filtered and synthesized in such a way that they coalesce into bundles of topically specified public opinions”. In the public sphere, problems of relevance to the whole society are discussed and influence the development of authoritative law. Jürgen Habermas, *Between Facts and Norms* (MIT Press 1996), 360.

⁵¹ Young, *Justice and the Politics of Difference* (n 40)

exclusion.⁵² External exclusion refers to situation in which particular groups are excluded from participating in decision-making fora altogether. Wide inclusion in decision-making processes is key in overcoming external exclusion. Internal exclusion refers to situations of nominal inclusion in decision-making fora but de facto exclusion due to deafness towards particular voices and ways of expression. In addition to rational argumentation, Young therefore proposes using techniques in decision-making fora to broaden the definition of what is suitable communication⁵³For Young, ‘a theory of democratic inclusion requires an expanded conception of political communication, both in order to identify modes of internal inclusion and to provide an account of more inclusive possibilities of attending to one another in order to reach an understanding’.⁵⁴

She proposes three modes of communication so to mitigate internal exclusion: greetings, rhetoric and narrative.⁵⁵ Greeting is the process of subject-to-subject recognition/acknowledgement that occurs prior to the expression of content by the subjects. Greeting is a preliminary step of great importance because it is through greeting that the subjects demonstrate their readiness to listen, mutual respect, and a willingness to take responsibility for their relations with the other subjects. Greetings are a useful communicative tool to establish trust. The explicit acknowledgement of others and their agency contributes others to be treated as subjects rather than objects. However, it is principally by introducing rhetoric as a mode of communication that Young challenges the supremacy of rational argumentation at the basis of Habermas’ theory. Rhetoric refers to forms of expressions that do not necessarily include speech, such as visual media and signs. These embodied and affective styles of expression for Young are to be included in communication because they bring forth the inherent historical and cultural specificity of perspectives and can recover the voices of those unable to communicate via rational argumentation. The purely rational discourse that is at the basis of Habermas’ theory is for Young an abstraction because it fails to recognise the situatedness of perspectives and the link between the emotive and the rational.⁵⁶ Moreover, ‘the ideal of disembodied and disembedded reason [...] is a fiction. What such privileging takes to be neutral, universal, and dispassionate expression actually carries the

⁵² Young, *Inclusion and Democracy* (n 39) 53-56.

⁵³ *ibid* Ch 2.

⁵⁴ *ibid* 56.

⁵⁵ *ibid* Ch 2.

⁵⁶ *ibid* 56.

rhetorical nuances of particular situated social positions and relations'.⁵⁷ Habermas' distinction between the illocutionary and perlocutionary components of a speech act is not tenable according to Young.⁵⁸ If for Habermas, perlocutionary acts are to be associated with strategic manipulation and therefore should not be used in deliberation because they bring in an instrumental element, Young argues that it is arbitrary to distinguish between the two because every speech act uses also rhetorical speech (the perlocutionary component) as the speaker aims to produce a particular effect on the audience.⁵⁹ The use of rhetoric should not be equated with an attempt to instrumentalise the decision-making process but can be used more positively to further understanding, to emphasise the importance of an issue and to contextualise claims and arguments. Also, narrative as understood by Young helps in situating perspectives and share experiences and knowledges that may otherwise go unheard. Through storytelling, the speakers provide the context for their position and this helps the listeners correcting assumptions about them. Also, as the stories told are stories about people's relationships with other people, they provide situated knowledge, contributing to the growth of overall social knowledge, when combined with other narratives from different perspectives. To the criticisms that these modes of communication can be manipulative, Young insists that they should not be seen as replacing rational communication but as complementing it in an enlarged conception of democratic engagement.⁶⁰ Indeed, rhetoric accompanies argument, narratives are part of larger arguments and greetings precede the giving of reasons. In the work of Young, participatory decision-making is therefore both an element of justice (procedural justice) and a prerequisite for achieving (distributive) justice and minimising existing structural inequalities.

Fraser also challenges the exclusive focus on distributional justice of classic justice theories by arguing for 'the struggle for recognition' and for 'participatory parity' of all affected by decision-making as the basis for justice.⁶¹ The cultural or institutional marginalisation of certain social groups and individuals is to be overcome by recognising such groups and individuals as equal participants in processes of decision-making. The dimensions of 'participatory parity' that Fraser identifies are redistribution and recognition and, more

⁵⁷ Young, *Inclusion and Democracy* (n 39) 63.

⁵⁸ Habermas, *The Theory of Communicative Action* (n 49).

⁵⁹ Young, *Inclusion and Democracy* (n 39) 66.

⁶⁰ *ibid* 80.

⁶¹ Nancy Fraser, 'From Redistribution to Recognition? Dilemmas of Justice in a 'Post-socialist' Age' (1995) 212 *New Left Review* 68.

recently, representation.⁶² Redistribution refers to economic and social structures which overcome economic disparities and exploitation and recognition refers to institutionalised cultural patterns which grant individuals or groups equal respect. The addition of the third dimension of representation to Fraser's 'perspectival dualism' is important as it attends to the political realm critically reviewing decision-making procedures, next to the cultural (recognition) and economic (redistribution). Representation through participatory procedures enables the resolution of contests in both the economic and the cultural dimensions.

If Young and Fraser provide us with a convincing justification for putting procedural justice first, these theorists focus exclusively on justice for human actors, on social justice. Young and Fraser are concerned with the empowerment of marginalised social groups through inclusive processes of deliberation. For example, when Young discusses the use of narratives she refers to the social knowledge that can be accumulated through the reflection of encounters with other social actors.⁶³ In the world of Young, narratives do not contain stories of human and nature interactions. The inclusion of non-human nature in considerations of justice is not a topic discussed by these scholars. Similarly, and perhaps more surprisingly, many environmental justice scholars have been anthropocentric in their focus, primarily preoccupied with the unjust distribution of environmental bads.⁶⁴ This anthropocentric focus can however be explained by reference to the history of environmental justice movement, which was originally tied up with civil rights struggles of poor Afro-American communities in the United States in the 1970s and 1980s.⁶⁵ The focus was therefore on recording the experiences of marginalised communities exposed to high levels of environmental harms and addressing the injustices of environmental racism. Extending theories of procedural justice to new constituencies such as nature and future generations itself is challenging but, given that the focus of attention here is on the resilience of a social-ecological system, doing justice to the ecological component is as important as doing justice to the social one. Following a resilience perspective, social and ecological systems are interlinked and an anthropocentric approach falls short of recognising such systemic complexity.

⁶² Nancy Fraser, 'Mapping the Feminist Imagination: From Redistribution to Recognition to Representation' (2005) 12 *Constellations* 295.

⁶³ Young, *Inclusion and Democracy* (n 39) 70-77.

⁶⁴ Andrew Dobson, *Justice and the Environment: Conceptions of Environmental Sustainability and Theories of Distributive Justice* (Clarendon Press 1998); Nicholas Low and Brendan Gleeson, *Justice, Society, & Nature* (Taylor & Francis 1998).

⁶⁵ See for example, Robert Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality* (Westview Press 1990); Luke Cole and Sheila Foster, *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement* (New York UP 2001).

3.2 Ecocentric Procedural Justice

Schlosberg, a leading current environmental justice scholar, has attempted to move beyond the anthropocentric focus of the justice literature bringing non-human actors into his theory of justice.⁶⁶ Schlosberg's argument is influenced by Young and Fraser, inter alia, in that his theory of justice incorporates recognition and participation as key elements. However, he moves beyond Young and Fraser in applying the concept of recognition to nature itself. As Schlosberg argues, extending justice to nature can be justified by disparate ethical positions that either assign intrinsic or instrumental value to nature.⁶⁷ Indeed, extending justice to nature can be done using arguments for the recognition of nature's integrity but also on the basis of expanded self-interest (as humans are part of nature, harming nature can affect also human well-being).⁶⁸ If there is no shortage of ethical perspectives to justify extending justice to nature, understanding how to translate this extension from the ethical plane to the governance one in a way that is reconcilable with an approach aimed at building resilience is much more problematic.

In concretising these theoretical insights on justice to nature, the key problem encountered is that of representation. As O' Neill clearly put it,⁶⁹ the problem of representation produces a number of normative questions: who is being represented in the political or decision-making process (individual or groups)? what is being represented (individual interests or common interests)? who is doing the representation (what is the relationship between the represented and representative)? and what is the source of legitimacy of the representation when traditional mechanisms of accountability are lacking as the represented (i.e. nature) cannot authorise and hold the representative to account? These questions are difficult to answer because nature and future generations lack a voice of its own (presence) and cannot authorize or hold to account those representing their interests.

Following Pitkin, representation can be defined in general terms as 'making present in some sense of something which is nevertheless not present literally or in fact'.⁷⁰ Elections within

⁶⁶ Schlosberg (n 39).

⁶⁷ *ibid* Ch 5.

⁶⁸ See also Robyn Eckersley, 'The Discourse Ethic and the Problem of Representing Nature' (1999) 8 *Environmental Politics* 24. In that paper Eckersley defends bringing nature into the moral realm by critically engaging with Habermas' discourse ethics.

⁶⁹ John O' Neill, 'Representing People, Representing Nature, Representing the World' (2001) 19 *Environment and Planning C: Government and Policy* 489.

⁷⁰ Hanna Pitkin, *The Concept of Representation* (University of California Press 1967) 8-9.

nation-states are a traditional means of political representation of democratic countries. Elected representatives have the authority to act and are accountable to their constituencies. Indeed, authorization and accountability are the key elements of what Pitkin terms ‘formalistic representation’.⁷¹ Authorization and accountability remain also the core elements of representation for Young, who argues, in line with a decentred approach, that accountability should be strengthened through processes of evaluation in both official institutions and in the public sphere, pluralising the sites in which accountability occurs.⁷² However, in complex social-ecological systems affected by change and uncertainty, new constituencies emerge that are not easily represented through traditional mechanisms. Therefore, the preliminary question that needs addressing in this respect is: ‘how can these new constituencies be represented?’ A number of green political theorists have provided answers to this question by focussing on the representation of nature. Their insights can be helpful. Notable is the work of Dryzek, as well as Eckersley and Dobson.⁷³ Dobson argued for direct representation of future generations and nature by proxy elected by constituencies in what he terms the ‘environmental lobby’.⁷⁴ For Dobson, proxy representatives can act as trustees for nature and future generations and be accountable delegates to the environmental lobby. As Dobson writes, in relation to the representation of future generations, a plausible approach to deciding the proxy is ‘to identify a lobby in the present generation that has its eyes firmly rooted on the future, as it were. One such lobby (admittedly hard to pin down) is that which argues in favour of environmental sustainability’.⁷⁵ Dobson adopts the same logic in relation to the representation of other species.⁷⁶ Therefore, Dobson seeks to enlarge the electoral system so to allow more group representations via proxy. However, in doing so, Dobson remains tied to the traditional and narrow focus of representative politics based on the legislature-constituency dyad and the traditional means of authorization and accountability. Indeed, for Dobson proxies representatives should be elected by proxy constituencies that comprise the environmental lobby, which is left undefined in his writing, and their representation of nature in decision-making processes would be accountable to the proxy electorate.

⁷¹ *ibid.*

⁷² Young, *Inclusion and Democracy* (n 39), 128-133.

⁷³ John Dryzek, *Deliberative Democracy and Beyond: Liberals, Critics, Contestations* (OUP 2002); Robyn Eckersley, *The Green State: Rethinking Democracy and Sovereignty* (The MIT Press 2004); Andrew Dobson, ‘Representative Democracy and the Environment’ in William Lafferty and James Meadowcroft (eds) *Democracy and the Environment: Problems and Prospects* (Edward Elgar 1996).

⁷⁴ Dobson, ‘Representative Democracy’ (n 74) 136.

⁷⁵ *ibid* 133.

⁷⁶ *ibid* 135-138.

As for Dryzek, he defends the representation of nature expanding Habermas's theory of communicative rationality by transcending its anthropocentric focus.⁷⁷ If for Habermas deliberation occurs in communication among rational human beings, for Dryzek there is no reason why communication should have a human source. As deliberation involves 'reflection upon preferences induced by communication in non-coercive fashion'⁷⁸ and such reflection serves to enlarge individual thinking, there is no reason why the interested that are internalised during the process of enlargement need to be confined to those of humans. Dryzek argues that extending communication to nature is possible if nature is treated as an agent. Agency should not be confused with subjectivity though, as self-awareness is a prerequisite of subjectivity. Dryzek writes:

[...] the most effective and insidious way to silence others in politics is a refusal to listen, which is why the practice of effective listening has to be central to any discursive democracy. Recognition of agency in nature therefore means that we should listen to signals emanating from the natural world with the same sort of respect we accord communication emanating from human subjects, and as requiring equally careful interpretation.⁷⁹

To do so, two conditions need to be satisfied. The first is the capacity to be represented. Dryzek here makes an argument that is reminiscent of Dobson's argument for proxies,⁸⁰ arguing that as there are many human beings that cannot speak for themselves but are represented by proxy, so should the environment. Indeed, Dryzek states that 'if nature cannot receive equality in the politics of presence, it can receive such treatments when it comes to politics of ideas'.⁸¹ The second is a capacity for effective and egalitarian listening, which also enables overcoming unequal power distribution.⁸² Extending participation to nature therefore involves both representatives of nature's interests and a listening capacity manifested in the attention to feedback signals from natural systems. Examples of institutional devices and techniques for listening to nature are, according to Eckersley, mandatory state of the environment reporting and environmental impact assessments to improve the flow of environmental information and the knowledge base on environmental matters.⁸³ Indeed Eckersley argues that the interests of what she terms 'differently situated others' can be discovered by appropriate environmental

⁷⁷ Dryzek, *Deliberative Democracy and Beyond* (n 74) Ch 6.

⁷⁸ *ibid* 140.

⁷⁹ Dryzek *Deliberative Democracy and Beyond* (n 74)149.

⁸⁰ Dobson, 'Representative Democracy and the Environment' (n 74).

⁸¹ Dryzek *Deliberative Democracy and Beyond*(n 74)154.

⁸² *ibid* 149.

⁸³ Eckersley, *The Green State* (n 74) 126.

techniques alongside more ‘vernacular understandings of environmental problems’,⁸⁴ thereby overcoming the epistemological challenge of representing nature.⁸⁵

3.3 Just Resilience

Although the theorists considered above have provided interesting justifications and solution for the representation of non-human nature and future generations, Saward, embracing a constructivist understanding of representation, convincingly argues that these theories are underpinned by uni-directionality between the represented and the representative, with the latter occupying a passive role of listening to the interests of the represented object and only reporting those to the decision-making forum through appropriate techniques.⁸⁶ Saward convincingly criticises Dryzek’s emphasis on listening to signals from the natural world because ‘listening implies passivity on the listener, mere receptiveness of what is given’⁸⁷ as well as Eckersley’s point that appropriate techniques, such as environmental monitoring, are a means to listen to those interests.⁸⁸

The unidirectional view of representation is underpinned by an assumption of the existence of a set of pre-existing objective interests of the represented that the representative brings to the political realm. The theoretical discussions of green theorists such as Dryzek or Eckersley hence focus on the epistemological/linguistic challenges for discovering the interests of nature.⁸⁹

In contrast, Saward pushes for the acknowledgement of the role of the representative in contributing to the creation and framing of the views of the represented.⁹⁰ For Saward, a thicker conception of representation is needed, one that is bi-directional rather than uni-directional, one that acknowledges the co-construction of the representative and the represented. Representation is understood by Saward as a process because it is linked with ‘the economy of claim-making rather than fact-establishing’.⁹¹ The focus is on claim making, rather than on whether the representative is advancing the pre-existing interests of the represented. Political representation for Saward becomes a performance involving many processes of claim making

⁸⁴ *ibid* 126.

⁸⁵ *ibid* 120.

⁸⁶ Michael Saward, ‘Representation’, In Andrew Dobson and Robyn Eckersley (eds), *Political Theory and the Ecological Challenge* (CUP 2006).

⁸⁷ *ibid* 190.

⁸⁸ *ibid* 188.

⁸⁹ Dryzek, *Deliberative Democracy and Beyond* (n 74); Eckersley, *The Green State* (n 74).

⁹⁰ Michael Saward, *The Representative Claim* (OUP 2010).

⁹¹ *ibid* 44.

(some official and some not) rather than a fact produced by elections. The representative subject does not merely report the interests of the represented but in representing those, s/he constructs them. Therefore, the role of the representative, our proxy, involves 'evoking one or more potential versions of what is there to be represented'.⁹²

This view renders culturally available various ways of thinking about new constituencies, whether nature or future generations and shakes the presumption of stable and objectively knowable interests of such constituencies. At the core of Saward's argument is a rejection of a conventional approach to representation, which consists in the subject (an individual or collective) standing up for, speaking for an object (the constituency). An example of the conventional approach would be an elected MP (subject) speaking for a constituency (object). Saward argues that this picture is reductive because it does not take into account of the fact that 1) the individual or collective constructs or make the claim, 2) what is represented by the subject is not the actual constituency but an idea of the constituency, 3) there is an audience that accepts or rejects the claim. Hence, the maker of the claim puts forward a subject, who represents the object (his/her idea of the constituency) that is a (partial) account of the referent (the actual constituency) and the claim is offered to an audience.⁹³ As Saward puts it : 'A maker of representations ('M') puts forward a subject ('S') which stands for an object ('O') that is related to a referent ('R') and is offered to an audience ('A')'.⁹⁴ Distinguishing between the maker of a claim and the subject is noteworthy in highlighting that political representation is constitutive, ie who makes the claim needs to constitute himself/herself as a subject and he/she is not only representative by acting for a constituency, ie he/she is not simply the proxy acting on behalf of the environmental lobby, as envisaged by Dobson.⁹⁵ Similarly, distinguishing between the object and referent shows that what is represented is an idea of the represented, rather than the referent itself. This does not mean that representation is an act of invention but that the object in a representative claim is only one representation of the referent that can be contested by other representations brought forward by other subjects in claim-making. Finally, the addition of the audience, whose role is to acknowledge or dismiss the claims made, is important as the object and the audience are not necessarily the same thing. The audience includes all those who 'hear, hear about, read' the claim and 'respond to it in

⁹² Saward, 'Representation' (n 87) 188.

⁹³ Saward, *The Representative Claim* (n 91) 38.

⁹⁴ *ibid* 36.

⁹⁵ Dobson, 'Representative Democracy' (n 74).

some way'.⁹⁶ For Saward, claim-making happens in a variety of fora, not only official ones following elections and the representative claim is circular in the sense that audiences are active, not merely passive recipients of the claims put forward by subjects.⁹⁷

The implications of Saward's constructivist approach to representation for adaptive governance are far reaching. As Saward writes 'a conception of representation which stresses its dynamic, claim-based character, its performative aspects as well as its narrowly institutional ones, and its potential for radical extension, can open up new ways for us to think about political inclusion and a more pluralistic representative politics'.⁹⁸ Saward's point on the constitutive relationship between the represented and the representative permits us to acknowledge the plurality of objects that are constructed in the processes of representation and to argue for rendering them all available.

These observations are also very useful in reflecting on the normative problems regarding the validity of representation of nature. As discussed above, representing new constituencies such as nature or future generations is problematic because of the absence of traditional means of authorisation and accountability. If the solution proposed by Dobson on proxies is not endorsed, all that is left is to use epistemic values as a source of legitimisation. This needs to be differentiated from the processes of knowledge-gathering advocated by the resilience scholars because those are underpinned more by an instrumentalist view, as explained above. The reliance on knowledge as a source of legitimisation is made by O'Neill⁹⁹ and it resonates also with the argument by Eckersley¹⁰⁰ on familiar techniques such as the state of environment reporting and environmental impact assessment touched upon above. However, this raises two new questions. The first regards who holds the best knowledge to represent new constituencies such as nature. The classical debate between technocratic decision-making and the opening up of the decision-making space to other actors re-opens. From a deliberative and inclusive democratic perspective, as per Young, this question can be answered straightforwardly, advocating for the inclusion of different representatives of the environmental interests in the decision-making forum. The second question however is more difficult to answer because it

⁹⁶ Saward *The Representative Claim* (n 91) 49. This is Saward's definition of the actual audience which he distinguishes from the intended audience, i.e. the group that a maker intends to speak to. The actual audience can be wider than the intended audience, including also other citizens.

⁹⁷ *ibid* 50.

⁹⁸ Michael Saward, 'The Representative Claim' (2006) 5 *Contemporary Political Theory* 297, 299.

⁹⁹ O'Neill, 'Representing People, Representing Nature, Representing the World' (n 69).

¹⁰⁰ Eckersley, *The Green State* (n 74).

concerns, as O'Neill put it, 'which knowledge claims are normatively relevant to the representation of nature'?¹⁰¹ Knowledge claims can be made regarding the welfare of individual species or the functioning of ecosystem, current environmental interest or potential future interests. Are these knowledge claims equally valid?

Resilience thinking helps answering such questions. A resilience perspective, as discussed in the overview provided above, is centred on a systemic and dynamic view of social-ecological systems. At its core lies a recognition of the complex and dynamic interdependence between social and natural systems operating at different temporal and geographical scales, requiring adaptive governance and adaptive management strategies. It follows that knowledge claims that are normatively valid are those capable of representing such systemic complexity and dynamism, recognising and embracing change at different scales, favouring the maintenance of functions and services. Knowledge needs to be de-centred to mirror the multiple temporal and geographical scales of a complex social-ecological system. Indeed, specifically discussing the resilience of protected areas as a social-ecological system, Cumming and Allen state

rather than thinking of conservation as an effort to either prolong the life of a dying patient or optimise particular variables (whether the number of species, returns on conservation dollars, or the design of protected areas), social-ecological system perspectives recognise the inevitability of change and also, in many cases, the need for it. This de-emphasizes the identity of individual species in favour of functions and services.¹⁰²

Moreover, the systemic emphasis of resilience thinking is in line with the inclusive ethics argued for above because the acknowledgement of knowledge claims arising from different scales is required to reflect the cross-scalar complexity of the systems. Cutting-edge scientific knowledge, potentially capable of displaying a more holistic/ecosystemic view, should be brought to the deliberative forum together with situated ecological knowledge because well suited to represent the local geographical and temporal scales. This is also in line with Seward's point about the mutual constitutive relationship between the represented and the representative because different objects (whether ideas of natures, future generations, communities) can come to the fore through an inclusion of many knowledge claims from different makers, each reading the referent in different ways. Such constructions are subject to both social and ecological changes, so that the referents are also in the making. Indeed, new ecological systems develop

¹⁰¹ O' Neill, 'Representing People, Representing Nature, Representing the World' (n 69) 496.

¹⁰² Graeme Cumming and Craig Allen, 'Protected Areas as Social-Ecological Systems: Perspectives from Resilience and Social-Ecological Systems Theory' (2017) 27 *Ecological Applications* 1709-1717.

with climate change (eg species distribution changes) and new societal needs emerge due to a changing political-economy and ecological context. One-off representations have a limited value. Deliberation should be an on-going practice responding to social-ecological changes and feedbacks at multiple scales. Therefore, we can infer that a just resilience perspective requires the representation of multiple readings of the referents by a variety of makers (not only green groups/NGOs) putting forward representative subjects at multiple scales backed up by collective monitoring and reviewing by both makers and audiences.¹⁰³ Also, in line with Young, such readings should occur in different formats to enable different modes of communication and maximise internal inclusion. Rhetoric and narratives can be part of the communication used in deliberation. Visual media, signs etc. can be used to represent nature and narratives can be used to tell stories about specific and contextual nature-society interactions, contributing to the building of shared social-ecological knowledge. As for collective monitoring and reviewing, again following Young, this should take place in both official institutions and in the public sphere, decentralising every stage of deliberation to mirror the scales of the social-ecological system under scrutiny. Such decentring should however avoid dispersion so that mechanisms for bringing together decentred deliberation and decentred monitoring should be found.

What are the implications of this theoretical discussion for environmental law? How can we design laws that are underpinned by a just resilience perspective? The key is to avoid suppressing plurality by enabling multiple representative claims to be made regarding nature and future generations. The aim to recognise diverse understandings, constructions and interests acknowledging the process-oriented nature of representation to achieve procedural justice. As Schlosberg writes, ‘such recognition and participation is not only an argument for expanded ecological democracy, but is also an integral element in achieving justice as well’.¹⁰⁴

Therefore, just resilience in environmental law is more likely to be achieved when the law guarantees inclusive procedures to recognise the diversity of actors and knowledges and the diversity of modes of communication coupled with strict collective monitoring and reviewing in a variety of official and unofficial fora. Indeed, given the plurality and complexity described, the law needs to contain provisions for ensuring the flexibility of interventions and enable

¹⁰³ Seward, *The Representative Claim* (n 91) 196.

¹⁰⁴ Schlosberg (n 39) 17.

revision of measures adopted in the light of new perspectives, new knowledge, new constructions of nature and societies and new physical changes. The law's role is a facilitative and responsive one: setting in place procedural mechanisms to allow different versions of the referents to be represented and to put in place collective monitoring and reviewing techniques to revise decisions in response to cross-scalar social-ecological changes. Adaptive governance needs to be polycentric. State institutions continue to be relevant but also institutions at other scales, with different degree of formality mirroring the scales of the social-ecological system. The accountability gaps this flexible procedural system creates are overcome through the monitoring and evaluation happening in the public sphere where the 'audiences' described by Saward have an active role capable of challenging claims made by the makers and are part of the public sphere and through the construction of shared social-ecological knowledge given that, following O'Neill, when traditional forms of accountability and authorization are lacking, valid knowledge becomes a source of legitimisation. In any case, just resilience is based on a contingent politics, on an understanding of decision-making as a process of becoming rather than a finished product. The next and final section of the article brings the threads of the argument together and provides some suggestions for future research on just resilience and environmental law.

4. CONCLUSION

This article has provided a contribution to law and resilience literature and resilience scholarship in general, by making a first attempt at discussing issues of inclusion and representation in adaptive governance, employing justice lenses. Resilience literature has long emphasised the importance of participation in adaptive governance primarily from an instrumental view point, ie participation as a means to fill in the scientific knowledge gaps in complex systems. More recently, law and resilience literature has connected participation to legitimacy, defined as social acceptability of a decision. This has enabled resilience scholars to discuss participation more holistically beyond a purely instrumentalist focus. However, the normative questions of who should be represented and why have not been answered in the existing literature.

Drawing on procedural theories of justice and green political thinking, this article has contended that putting the accent on inclusive decision-making, rather than focussing from the start on who the social and ecological beneficiaries should be, is a helpful initial step for attending to such challenges. Following Young, due attention should be placed on processes to

minimise external and internal inclusion in decision-making. Secondly, the article has claimed that given resilience's focus on complex social-ecological systems entailing different temporal and geographical scales, new constituencies need to be represented in governance and decision-making (eg natures, future generations).

Building on Saward's theory of the representative claim,¹⁰⁵ this article has argued that representation is more an event/performance than a fact and that representatives (whether proxy or otherwise) are not only listening to the pre-existing interests of particular referents (be these nature or future generations) but, through claim-making, contribute to the creation of the objects of the representation (the ideas of nature/future generations), which are offered to active audiences. Such a constructivist view has important implications for rethinking the role of environmental law and governance in fostering the resilience of social-ecological systems. The key one is that it is not enough to develop techniques (such as state of the environment monitoring and environmental impact assessments) to listen to the interests of nature, as per Dryzek¹⁰⁶ and Eckersley¹⁰⁷ and incorporate them in decision-making. Also, it is not enough to have proxies elected from environmental lobbies as per Dobson¹⁰⁸ because the dynamic view of representation put forward by Saward moves beyond traditional mechanisms of accountability of representative politics and beyond an assumption of pre-existing fixed interests. As Saward points out, this social constructivist view should not be taken to the extreme arguing that there are no referents prior to the constitution in politics. It should be interpreted as meaning that the objects of the representation vary depending on the maker of the claim and that claims can be made in a number of contexts, also outside the state and elections. As Saward puts it, 'of course people and groups exist prior to evocation or constitution in politics. There is always a *referent*. But the real political work lies in the active constitution of constituencies – the making of representations'.¹⁰⁹ In a complex social-ecological system, claim-making regarding a system's resilience can and should occur in multiple, more or less, official spaces and by a number of actors. The role of the law is to facilitate such plurality of claim making and put in place mechanisms for reviewing decisions following the changes undergone by the system. In order to do so, the law will need to set in place strategies such as collective monitoring and reviewing of the system's resilience and the

¹⁰⁵ Saward, *The Representative Claim* (n 91).

¹⁰⁶ Dryzek (n 74).

¹⁰⁷ Eckersley, *The Green State* (n 74).

¹⁰⁸ Dobson, 'Representative Democracy' (n 74).

¹⁰⁹ Saward, *The Representative Claim* (n 91) 52.

inclusion of different actors and knowledge claims in on-going deliberative fora in official settings and in the public sphere to increase representation at different scales of the social-ecological system and in so doing achieve procedural justice.

As the article demonstrated, dynamism and learning are at the core of a resilience approach, demanding both governance and management to be adaptive with solid provisions for monitoring, reviewing and re-assessing existing measures. Justice, as interpreted and defined in this article, adds to the resilience perspective a focus on broad inclusion and representation of both human and non-human actors and knowledge claims. Flexible and participatory procedures to account for the plurality and changes in (constructions) of social-ecological systems is a prerequisite for distributive justice because deliberation can include discussion on a just distribution of law's benefits (to natures and to humans) and costs (to natures and to the humans).

On a more cautionary note, it should be stressed, as Craig and Ruhl also mention,¹¹⁰ that the implications of a just resilience perspective may be more relevant for certain sectors of environmental law than others. Not all environmental law is concerned with dynamic and complex social-ecological systems. Consequently, the facilitative role of the law in enabling practices of collective monitoring and reviewing and inclusive claim-making may not be appropriate in every case and for facing any type of environmental threat. This article has presented a sketch of the perspective of just resilience, focussing on theoretical issues and focusing on the representation of the various components of the social-ecological system. It is the task of future research to consider how such perspective enable us to assess and rethink substantive sectors of environmental law in the context of global environmental change and what legal tools are best capable of securing just resilience.

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¹¹⁰ Craig and Ruhl (n 16).